

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number:

09/724569 B

Source:

IFW16

Date Processed by STIC:

5/12/5

# ***ENTERED***



IFW16

## RAW SEQUENCE LISTING

DATE: 05/12/2005

PATENT APPLICATION: US/09/724,569B

TIME: 10:49:00

Input Set : A:\152706446 2nd Sub Seq List.txt

Output Set: N:\CRF4\05122005\I724569B.raw

P.6

4 <110> APPLICANT: Anderson, John P.  
5 Basi, Guriqbal  
6 Doane, Minh Tam  
7 Frigon, Normand  
8 John, Varghese  
9 Power, Michael  
10 Sinha, Sukanto  
11 Tatsuno, Gwen  
12 Tung, Jay  
13 Wang, Shuwen  
14 McConlogue, Lisa  
16 <120> TITLE OF INVENTION: Beta-Secretase Enzyme Compositions and  
17 Methods  
19 <130> FILE REFERENCE: 228-US-NEW2C6  
21 <140> CURRENT APPLICATION NUMBER: 09/724,569B  
22 <141> CURRENT FILING DATE: 2000-11-28  
24 <150> PRIOR APPLICATION NUMBER: US 09/501,708  
25 <151> PRIOR FILING DATE: 2000-02-10  
27 <150> PRIOR APPLICATION NUMBER: 60/119,571  
28 <151> PRIOR FILING DATE: 1999-02-10  
30 <150> PRIOR APPLICATION NUMBER: 60/139,172  
31 <151> PRIOR FILING DATE: 1999-06-15  
33 <160> NUMBER OF SEQ ID NOS: 104  
35 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
37 <210> SEQ ID NO: 1  
38 <211> LENGTH: 1503  
39 <212> TYPE: DNA  
40 <213> ORGANISM: Homo sapiens  
42 <400> SEQUENCE: 1  
43 atggcccaag ccctgccctg gctcctgctg tggatgggcg cgggagtgtg gcctgcccac 60  
44 ggcacccagc acggcatccg gctgcccctg cgcagcggcc tggggggcgc ccccctgggg 120  
45 ctgcggctgc cccgggagac cgacgaagag cccgaggagc ccggccggag gggcagcttt 180  
46 gtggagatgg tggacaacct gaggggcaag tcggggcagg gctactacgt ggagatgacc 240  
47 gtgggcagcc cccgcagac gctcaacatc ctggtggata caggcagcag taactttgca 300  
48 gtgggtgctg ccccccaccc cttcctgcat cgctactacc agaggcagct gtccagcaca 360  
49 taccgggacc tccggaaggg tgtgtatgtg ccctacaccc agggcaagtg ggaaggggag 420  
50 ctggggcaccg acctggtaag catcccccat ggccccaacg tcactgtgcg tgccaacatt 480  
51 gctgccatca ctgaatcaga caagtctctc atcaacggct ccaactggga aggcacacctg 540  
52 gggctggcct atgctgagat tgccaggcct gacgactccc tggagccttt ctttgactct 600  
53 ctggtaaaagc agaccacagt tcccaacctc ttctccctgc agctttgtgg tgctggcttc 660  
54 cccctcaacc agtctgaagt gctggcctct gtcggaggga gcatgatcat tggaggtatc 720  
55 gaccactcgc tgtacacagg cagtctctgg tatacaccca tccggcgga gtggtattat 780  
56 gaggtgatca ttgtgcgggt ggagatcaat ggacaggatc tgaaaatgga ctgcaaggag 840

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```

57 tacaactatg acaagagcat tgtggacagt ggcaccacca accttcgttt gcccaagaaa      900
58 gtgtttgaag ctgcagtcaa atccatcaag gcagcctcct ccacggagaa gttccctgat      960
59 ggtttctggc taggagagca gctggtgtgc tggcaagcag gcaccacccc ttggaacatt    1020
60 ttcccagtc tctactcta cctaattgggt gaggttacca accagtcctt ccgcatcacc    1080
61 atccttccgc agcaatacct gcggccagtg gaagatgtgg ccacgtccca agacgactgt    1140
62 tacaagtttg ccatctcaca gtcatccacg ggcactgtta tgggagctgt tatcatggag    1200
63 ggcttctacg ttgtctttga tcgggcccga aaacgaattg gctttgctgt cagcgcttgc    1260
64 catgtgcacg atgagttcag gacggcagcg gtggaaggcc cttttgtcac cttggacatg    1320
65 gaagactgtg gctacaacat tccacagaca gatgagtcaa cctcatgac catagcctat    1380
66 gtcatggctg ccatctgcgc cctcttcatt ctgccactct gcctcatggg gtgtcagtgg    1440
67 cgctgcctcc gctgcctgcg ccagcagcat gatgactttg ctgatgacat ctccctgctg    1500
68 aag                                                                    1503
70 <210> SEQ ID NO: 2
71 <211> LENGTH: 501
72 <212> TYPE: PRT
73 <213> ORGANISM: Homo sapiens
75 <400> SEQUENCE: 2
76 Met Ala Gln Ala Leu Pro Trp Leu Leu Leu Trp Met Gly Ala Gly Val
77   1             5             10             15
78 Leu Pro Ala His Gly Thr Gln His Gly Ile Arg Leu Pro Leu Arg Ser
79             20             25             30
80 Gly Leu Gly Gly Ala Pro Leu Gly Leu Arg Leu Pro Arg Glu Thr Asp
81             35             40             45
82 Glu Glu Pro Glu Glu Pro Gly Arg Arg Gly Ser Phe Val Glu Met Val
83             50             55             60
84 Asp Asn Leu Arg Gly Lys Ser Gly Gln Gly Tyr Tyr Val Glu Met Thr
85 65             70             75             80
86 Val Gly Ser Pro Pro Gln Thr Leu Asn Ile Leu Val Asp Thr Gly Ser
87             85             90             95
88 Ser Asn Phe Ala Val Gly Ala Ala Pro His Pro Phe Leu His Arg Tyr
89             100            105            110
90 Tyr Gln Arg Gln Leu Ser Ser Thr Tyr Arg Asp Leu Arg Lys Gly Val
91             115            120            125
92 Tyr Val Pro Tyr Thr Gln Gly Lys Trp Glu Gly Glu Leu Gly Thr Asp
93             130            135            140
94 Leu Val Ser Ile Pro His Gly Pro Asn Val Thr Val Arg Ala Asn Ile
95 145            150            155            160
96 Ala Ala Ile Thr Glu Ser Asp Lys Phe Phe Ile Asn Gly Ser Asn Trp
97             165            170            175
98 Glu Gly Ile Leu Gly Leu Ala Tyr Ala Glu Ile Ala Arg Pro Asp Asp
99             180            185            190
100 Ser Leu Glu Pro Phe Phe Asp Ser Leu Val Lys Gln Thr His Val Pro
101             195            200            205
102 Asn Leu Phe Ser Leu Gln Leu Cys Gly Ala Gly Phe Pro Leu Asn Gln
103             210            215            220
104 Ser Glu Val Leu Ala Ser Val Gly Gly Ser Met Ile Ile Gly Gly Ile
105 225            230            235            240
106 Asp His Ser Leu Tyr Thr Gly Ser Leu Trp Tyr Thr Pro Ile Arg Arg
107             245            250            255

```

## RAW SEQUENCE LISTING

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```

108 Glu Trp Tyr Tyr Glu Val Ile Ile Val Arg Val Glu Ile Asn Gly Gln
109          260          265          270
110 Asp Leu Lys Met Asp Cys Lys Glu Tyr Asn Tyr Asp Lys Ser Ile Val
111          275          280          285
112 Asp Ser Gly Thr Thr Asn Leu Arg Leu Pro Lys Lys Val Phe Glu Ala
113          290          295          300
114 Ala Val Lys Ser Ile Lys Ala Ala Ser Ser Thr Glu Lys Phe Pro Asp
115 305          310          315          320
116 Gly Phe Trp Leu Gly Glu Gln Leu Val Cys Trp Gln Ala Gly Thr Thr
117          325          330          335
118 Pro Trp Asn Ile Phe Pro Val Ile Ser Leu Tyr Leu Met Gly Glu Val
119          340          345          350
120 Thr Asn Gln Ser Phe Arg Ile Thr Ile Leu Pro Gln Gln Tyr Leu Arg
121          355          360          365
122 Pro Val Glu Asp Val Ala Thr Ser Gln Asp Asp Cys Tyr Lys Phe Ala
123          370          375          380
124 Ile Ser Gln Ser Ser Thr Gly Thr Val Met Gly Ala Val Ile Met Glu
125 385          390          395          400
126 Gly Phe Tyr Val Val Phe Asp Arg Ala Arg Lys Arg Ile Gly Phe Ala
127          405          410          415
128 Val Ser Ala Cys His Val His Asp Glu Phe Arg Thr Ala Ala Val Glu
129          420          425          430
130 Gly Pro Phe Val Thr Leu Asp Met Glu Asp Cys Gly Tyr Asn Ile Pro
131          435          440          445
132 Gln Thr Asp Glu Ser Thr Leu Met Thr Ile Ala Tyr Val Met Ala Ala
133          450          455          460
134 Ile Cys Ala Leu Phe Met Leu Pro Leu Cys Leu Met Val Cys Gln Trp
135 465          470          475          480
136 Arg Cys Leu Arg Cys Leu Arg Gln Gln His Asp Asp Phe Ala Asp Asp
137          485          490          495
138 Ile Ser Leu Leu Lys
139          500
141 <210> SEQ ID NO: 3
142 <211> LENGTH: 24
143 <212> TYPE: DNA
144 <213> ORGANISM: Homo sapiens
146 <400> SEQUENCE: 3
147 gagagacgar garccwgagg agcc 24
149 <210> SEQ ID NO: 4
150 <211> LENGTH: 24
151 <212> TYPE: DNA
152 <213> ORGANISM: Artificial Sequence
154 <220> FEATURE:
155 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
156 ID NO: 2
158 <400> SEQUENCE: 4
159 gagagacgar garccwgaag agcc 24
161 <210> SEQ ID NO: 5
162 <211> LENGTH: 24

```

## RAW SEQUENCE LISTING

DATE: 05/12/2005

PATENT APPLICATION: US/09/724,569B

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Input Set : A:\152706446 2nd Sub Seq List.txt

Output Set: N:\CRF4\05122005\I724569B.raw

```

163 <212> TYPE: DNA
164 <213> ORGANISM: Artificial Sequence
166 <220> FEATURE:
167 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
168     ID NO: 2
170 <400> SEQUENCE: 5
171 gagagacgar garccwgaag aacc                                24
173 <210> SEQ ID NO: 6
174 <211> LENGTH: 24
175 <212> TYPE: DNA
176 <213> ORGANISM: Artificial Sequence
178 <220> FEATURE:
179 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
180     ID NO: 2
182 <400> SEQUENCE: 6
183 gagagacgar garccwgagg aacc                                24
185 <210> SEQ ID NO: 7
186 <211> LENGTH: 23
187 <212> TYPE: DNA
188 <213> ORGANISM: Artificial Sequence
190 <220> FEATURE:
191 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
192     ID NO: 2
194 <400> SEQUENCE: 7
195 agagacgarg arccsgagga gcc                                23
197 <210> SEQ ID NO: 8
198 <211> LENGTH: 23
199 <212> TYPE: DNA
200 <213> ORGANISM: Artificial Sequence
202 <220> FEATURE:
203 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
204     ID NO: 2
206 <400> SEQUENCE: 8
207 agagacgarg arccsgaaga gcc                                23
209 <210> SEQ ID NO: 9
210 <211> LENGTH: 23
211 <212> TYPE: DNA
212 <213> ORGANISM: Artificial Sequence
214 <220> FEATURE:
215 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
216     ID NO: 2
218 <400> SEQUENCE: 9
219 agagacgarg arccsgaaga acc                                23
221 <210> SEQ ID NO: 10
222 <211> LENGTH: 23
223 <212> TYPE: DNA
224 <213> ORGANISM: Artificial Sequence
226 <220> FEATURE:
227 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ

```

## RAW SEQUENCE LISTING

DATE: 05/12/2005

PATENT APPLICATION: US/09/724,569B

TIME: 10:49:00

Input Set : A:\152706446 2nd Sub Seq List.txt

Output Set: N:\CRF4\05122005\I724569B.raw

```

228      ID NO: 2
230 <400> SEQUENCE: 10
231 agagacgarg arccsgagga acc                                23
233 <210> SEQ ID NO: 11
234 <211> LENGTH: 23
235 <212> TYPE: DNA
236 <213> ORGANISM: Artificial Sequence
238 <220> FEATURE:
239 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
240      ID NO: 2
242 <400> SEQUENCE: 11
243 cgtcacagrt trtcaaccat ctc                                23
245 <210> SEQ ID NO: 12
246 <211> LENGTH: 23
247 <212> TYPE: DNA
248 <213> ORGANISM: Artificial Sequence
250 <220> FEATURE:
251 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
252      ID NO: 2
254 <400> SEQUENCE: 12
255 cgtcacagrt trtctaccat ctc                                23
257 <210> SEQ ID NO: 13
258 <211> LENGTH: 23
259 <212> TYPE: DNA
260 <213> ORGANISM: Artificial Sequence
262 <220> FEATURE:
263 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
264      ID NO: 2
266 <400> SEQUENCE: 13
267 cgtcacagrt trtccaccat ctc                                23
269 <210> SEQ ID NO: 14
270 <211> LENGTH: 23
271 <212> TYPE: DNA
272 <213> ORGANISM: Artificial Sequence
274 <220> FEATURE:
275 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
276      ID NO: 2
278 <400> SEQUENCE: 14
279 cgtcacagrt trtcgaccat ctc                                23
281 <210> SEQ ID NO: 15
282 <211> LENGTH: 23
283 <212> TYPE: DNA
284 <213> ORGANISM: Artificial Sequence
286 <220> FEATURE:
287 <223> OTHER INFORMATION: Degenerate oligonucleotide primer derived from SEQ
288      ID NO: 2
290 <400> SEQUENCE: 15
291 cgtcacagrt trtcaaccat ttc                                23
293 <210> SEQ ID NO: 16

```

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 05/12/2005  
PATENT APPLICATION: US/09/724,569B      TIME: 10:49:01

Input Set : A:\152706446 2nd Sub Seq List.txt  
Output Set: N:\CRF4\05122005\I724569B.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:22; N Pos. 12  
Seq#:23; N Pos. 12  
Seq#:24; N Pos. 12  
Seq#:25; N Pos. 12  
Seq#:26; N Pos. 7  
Seq#:27; N Pos. 7  
Seq#:28; N Pos. 3,12  
Seq#:29; N Pos. 3,12  
Seq#:34; N Pos. 16  
Seq#:35; N Pos. 16  
Seq#:36; N Pos. 16  
Seq#:37; N Pos. 16  
Seq#:48; N Pos. 6164,6238,6254,6255,6256,6257,6258,6259,6260,6261,6262,6263  
Seq#:48; N Pos. 6264,6265,6266,6267,6268,6269,6270,6271,6272  
Seq#:61; Xaa Pos. 4  
Seq#:72; Xaa Pos. 10  
Seq#:73; Xaa Pos. 5  
Seq#:76; N Pos. 6,18,27,30,33,36,39,42,48,57  
Seq#:78; Xaa Pos. 3  
Seq#:81; Xaa Pos. 4

## VERIFICATION SUMMARY

DATE: 05/12/2005

PATENT APPLICATION: US/09/724,569B

TIME: 10:49:01

Input Set : A:\152706446 2nd Sub Seq List.txt

Output Set: N:\CRF4\05122005\I724569B.raw

L:379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22 after pos.:0  
L:395 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23 after pos.:0  
L:411 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24 after pos.:0  
L:427 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25 after pos.:0  
L:443 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26 after pos.:0  
L:459 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27 after pos.:0  
L:475 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28 after pos.:0  
L:491 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29 after pos.:0  
L:551 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:34 after pos.:0  
L:567 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35 after pos.:0  
L:583 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:36 after pos.:0  
L:599 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:0  
L:960 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:6120  
M:341 Repeated in SeqNo=48  
L:1475 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:61 after pos.:0  
L:1967 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:72 after pos.:0  
L:1984 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73 after pos.:0  
L:2112 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:76 after pos.:0  
L:2140 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:78 after pos.:0  
L:2183 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:81 after pos.:0